KENTUCKY HERITAGE COUNCIL,
2010-2011 FEDERAL SURVEY AND PLANNING GRANTS

1. APPLICATION INFORMATION			
Organization Name	The University of Mississippi, Office of Research and Sponsored Programs		
Organization Address	100 Barr Hall The University of Mississippi University, MS 38677-1848		
Principal Contact Person Co-Principle Contact	Edward R. Henry Jay K. Johnson	Phone	662-915-5524
Contact Person Title	Research Associate, Coordinator for Remote Sensing Applications	Email	erhenry@olemiss.edu

	Local Government	X	University
	State Agency		Nonprofit Group
	Regional Planning Agency		Other

2. PROJECT INFORMATION			
A.	Category [check appropriate box(es).]	Total Amount Requested	**$8,881.49**
X	Survey (Archaeological)		CLG Administration
	Survey (Historic Building)		Rural Preservation
	Context Development		National Register Nomination(s)
	Pre-Development		Preservation Planning
	Technical Assistance		Publication
	Other		

B. Summary: On attachment provide a narrative summarizing the proposed project. Define the research methodology or approach. Define the time frame. Define the products. Define the project impact area and explain how local government and the public will be involved in the project. Archaeological projects also need a research design and must discuss how the project addresses the State Plan in Archaeology, *The Archaeology of Kentucky: Past Accomplishments and Future Directions*, which is available at http://heritage.ky.gov/envreview/archofky.htm (note: updated pdf files for the state plan are at the right side of the webpage).

C. Kentucky Heritage Council program priority: List program priorities from the Kentucky Heritage Council, 2010-2011 Federal Survey and Planning Grants Annual Priorities.

Archaeological Resources

- **Projects that fill data gaps or address research issues identified in the State Preservation Plan. (Fieldwork)**
- **Projects that develop local management or preservation plans.**

3. PROFSSIONAL QUALIFICATIONS
Attach a resume for the staff, consultant or principal investigator and other key personnel who will carry out the project. If this individual has not been identified, summarize the selection process to be used and the professional standards to be met by consultants. Professionals should meet the criteria established in 36C.F.R.61 and consultants must be selected in accordance with the National Park Service Regulations.

4. BUDGET
Complete the following Budget Summary form for your project.

5. SIGNATURE
I certify this organization complies with all Federal Fair Employment Laws including Title VI of the Civil Rights Act of 1964, Executive Order 11246 and the Rehabilitation Act of 1973. I certify the information in this application is true and accurate.
Signature of Chief Executive Officer and Title: Date: 9-20-2010
Alice M. Clark 9-22-10

Return electronic files or original and 5 copies of completed application with attachments to:

(By email to:)
Jackie.Bradley@ky.gov
Include in Subject Line: "Federal Survey and Planning Grants

OR

(By Postal Service to:)
THE KENTUCKY HERITAGE COUNCIL
ATTN: Federal Survey and Planning Grants
300 Washington Street
Frankfort, Kentucky 40601

KENTUCKY HERITAGE COUNCIL,
2010-2011 FEDERAL SURVEY AND PLANNING GRANTS

APPLICANT:	Edward R. Henry and Jay K. Johnson, Center for Archaeological Research, University of Mississippi
TOTAL GRANT REQUESTED:	**AMOUNT $ 8,514.58**

A. EXPENDITURES

Federal share cannot exceed 60% of total cost of expenditure. Non-federal share must be at least 40% or more of the total cost of expenditure. In-kind, non-federal share can be used as part of the 40% match but is not reimbursable.

TYPE OF EXPENDITURE	I. TOTAL COST OF EXPENDITURE	II. FEDERAL SHARE	NON-FEDERAL SHARE	
A. PERSONNEL			**III. CASH**	**IV. IN-KIND**
Staff Salary	5,120.00			2,144.00
Staff Fringe	1,193.60			1,088.08
Consultant Fees	0.00			0.00
Volunteer Service	0.00			0.00
B. OPERATING EXPENSES				
Rent	0.00			0.00
Utilities/Telephone	0.00			0.00
Printing/Copying	0.00			0.00
Photography	0.00			0.00
Computer Services	0.00			0.00
Travel	444.00			0.00
Expendable Supplies	0.00			0.00
Postage	0.00			0.00
Professional Development	0.00			0.00
Equipment	0.00			
Indirect Costs (Only universities)	1,756.98			1,258.42
C. OTHER (list)				
D. TOTAL ALL COLUMNS	8,514.58		*	6,098.50

B. SOURCE OF NON-FEDERAL SHARE (Columns III & IV above)

Provide organization source of all cash and in-kind contributions to the non-federal share. List in-kind and cash contributions from the same organization separately. In-kind contributions from the community donated through the sponsor may be totaled and listed as one item.

AGENCY/ORGANIZATION	SOURCE OF MATCH (e.g. General Funds)	CASH	IN-KIND	TOTAL
Center for Archaeological Research, University of Mississippi	Co-PI Salary		$6,098.50	$6,098.50
TOTAL ALL COLUMNS		$6,098.50	$6,098.50	

*Totals for Columns III and IV of Part A must equal total in Part B.

NARRATIVE

RESEARCH PROJECT GOALS

In this grant application we seek funding to support a multi-instrument geophysical investigation of Nelson-Gay Mound (15Ck10), an Adena burial mound and underlying earthwork on the border of the Inner and Outer Bluegrass regions. The recent successes of geophysical techniques in North American archaeological contexts include the identification of archaeological features such as houses, pit features, and mound remnants, in addition to the delineation of site boundaries (Dalan 1989, 2008; Dalan and Banjeree 1998; Fogel 2005; Henry 2009; Henry et al. 2009; Johnson et al. 2002; Johnson et al. 2000; McKinnon 2009; McKinnon et al. 2007; Peterson 2005; Reynolds 2002; Walker et al. 2008). However, fewer examples exist in North America where geophysical techniques have been applied to investigate features internal to earthen mounds (Pluckhahn et al. 2010, Thompson and Pluckhahn 2010, Whittaker and Storey 2008).

Given the increased quality of geophysical equipment and improvements in data processing software, we feel that the non-invasive examination of internal structures within earthen mounds is under-used. Though few, the use of geophysical techniques for this application have succeeded in the U.S. and abroad (Astin et al. 2007, Forte and Pipan 2008, Nuzzo et al. 2009, Persson and Olofsson 2003, Pluckhahn et al. 2010, Thompson and Pluckhahn 2010, Tonkov and Loke 2006, Whittaker and Storey 2008). Implementing these methods to investigate the internal structure and organization of the Nelson-Gay Mound, the circular earthwork it covers, and areas surrounding the mound has the potential to establish an understanding of this well-preserved Adena site. By conducting this research, we will be fulfilling multiple research goals and objectives outlined for the Woodland period in Kentucky by Applegate (2008). In addition, this research is consistent with the goals and vision of the Kentucky Native American Heritage Commission.

The Nelson-Gay Mound is a large (5 m tall) Adena burial mound and underlying earthwork, which is located in Clark County, Kentucky. Data from these geophysical investigations will be used to understand how the site was used in Adena mortuary practices and to develop interpretations of variation within the Adena mortuary paradigm. The non-invasive nature of this research will further the preservation, conservation, and management of this cultural resource by adhering to the no-excavation easement developed between the previous landowners of Nelson-Gay Mound and KHC.

Recently, archaeologists (Brown 2005, Clay 2005, Greber 2005) have suggested discarding Adena as a taxonomic unit and proposed examining Adena sites on sub-regional spatial and temporal scales in order to develop a better understanding of the variation that has troubled archaeologists studying this period of prehistory. The proposed geophysical investigations are one step in understanding how mortuary sites like Nelson-Gay fit into regional

and subregional Adena interpretations while being culturally sensitive to the concerns of modern Native American groups. Identifying internal structures common to Adena burial mounds (i.e. log tombs) will delineate how peoples interred their dead in Nelson-Gay Mound in addition to providing a comparative dating framework based on Clay's (1991) chronology of Adena ritual development. Nelson-Gay is unique in that it appears that construction of the burial mound extended beyond the circular earthwork it is situated within. Mapping the extent of the sub-mound circular earthwork will provide an understanding of both Adena earthwork construction in Kentucky and the trajectory of ritual reorganization at this site. Additionally, mapping construction stages within the mound would indicate how many times major mound modifications were undertaken at Nelson-Gay. These details can then be compared to the data on excavated burial mounds and earthworks nearby, in order to juxtapose ritual practices elsewhere with those at Nelson-Gay. The geophysical investigations proposed here takes the first step in answering these questions.

BACKGROUND

Although unexcavated, Nelson-Gay Mound (15Ck10) is one of the best known Adena mounds in Kentucky. The mound is located on private land between Pretty Run Creek and Stoner Creek, tributaries of the North Fork of the Licking River, in northeastern Clark County (Figure 1). The principal investigator on this grant application recreationally mapped the site in 2008. The topographic map shows that the burial mound consists of a primary mound with two smaller node-like mounds attached on the east and south (Figure 2). The faint outline of an embankment related to a possible underlying circular earthwork can be seen to the southeast and northwest of the mound. A very low area to the northeast of the site could represent a borrow pit. The topographic map indicates the primary mound is approximately 5 m tall, while the east node is 1.8 m tall and the south node is 2.2 m tall.

According to the current landowners, William S. Webb and William D. Funkhouser requested permission to excavate and rebuild the mound while overseeing the Works Progress Administration (WPA) archaeological excavations in Kentucky during the early twentieth-century (Lila and Ernie Cruse, personal communication, 2008). Their request was denied. Fortunately, landowners since then have been equally protective of the mound. Aside from two insignificant looting attempts, no plowing or excavations have impacted the mound (Lila and Ernie Cruse, personal communication, 2008). Despite the lack of excavation data from Nelson-Gay it has been mentioned in a publication by Clay (1998:10), who uses it as an example of a circular earthwork that was later obliterated by the mound constructed inside it.

In the mid-1980s Milner and Jefferies (1987) conducted a reevaluation of the WPA excavations at the Robbins Mound (15Be3). Their research suggests that the construction of Adena burial mounds is not initially focused on the conical shape these monuments are known for. Rather, these mounds are constructed in stages and only take a conical form after the terminal construction episode and subsequent erosion takes place (Milner and Jefferies 1987:40). Applying these conclusions to the Nelson-Gay Mound indicates that the mound was abandoned during intermediate construction phases and was never covered with a final capping episode.

Another important contribution of Milner and Jefferies research to this project lies in the identification of internal features like ramps leading to log tombs, as well as the log tombs themselves, in intermediate stages of mound construction (Milner and Jefferies 1987:37, 40). If Nelson-Gay was abandoned after intermediate construction events were finalized, then features such as log tombs and depressions associated with those tombs are likely present within the mound.

The Nelson-Gay Mound is an excellent example of a burial mound that could be successfully examined with non-invasive geophysical techniques in order to reveal large internal structures. The outcome of this survey has the potential to provide data that will further the understanding of Kentucky Adena at the subregional and regional level. There is a high probability that large internal features such as log tombs, ramps to log tombs, and construction episodes would be present within the mound. In addition, Clay (1998:10) has suggested the construction of this mound took place inside a circular earthwork that is only partially visible now. The topographic map of the site supports this interpretation (Figure 2). This makes the Nelson-Gay Mound unique because it is the only known site in Kentucky where the construction of a burial mound inside a circular earthwork encompasses nearly the entire earthwork. This sub-mound earthwork is another target of interest for the geophysical investigations and could promote an understanding of both the site and the relationship of earthwork and burial mound construction in the region.

METHODOLOGY

Geophysical examinations will be conducted in three phases. The first phase will consist of a magnetic gradiometer and electromagnetic induction (EM) survey of the mound and surrounding agricultural field. This survey will be completed using a Bartington Instruments Grad 601-2 dual fluxgate gradiometer and a Geonics EM38B electromagnetic induction meter. These instruments detect subsurface variations that can represent intact cultural deposits such as houses, hearths, and pits. Both techniques have been successfully employed on a wide range of prehistoric sites to map features similar to those anticipated to occur at Nelson-Gay (Clay 2006, Henry 2009, Johnson et al. 2002, Johnson et al. 2000, McKinnon et al. 2007, Peterson 2005, Reynolds 2002, Thompson et al. 2004, Walker et al. 2008). This phase of geophysical investigation has the greatest probability of identifying remnants of the circular earthwork outside the mound, in addition to off-mound features related to mortuary preparation and/or grave-side feasting rituals. Gradiometer and EM surveys have produced excellent results at circular earthworks that exhibit little topographic relief in Kentucky (Figure 3). Data from the areas surrounding the mound could benefit future archaeological research involving the excavation of features outside of the no-excavation buffer zone currently being negotiated by the landowners and KHC.

Phase two will include a three-antenna ground-penetrating radar (GPR) survey of the mound and earthwork remnants to map internal structures in three-dimensions. Single antenna GPR surveys are common in present-day geophysical surveys (Conyers 2004:7, Gaffney and Gater 2003:74, 76). These surveys are particularly successful when the targets to be mapped are

fairly large, hollow, and/or have distinct physical and chemical properties that contrast with the surrounding matrix (Conyers 2004:7, Forte and Pipan 2008, Persson and Olofsson 2003). Geophysical targets identified in this research (i.e. mound stages, log tombs, and the underlying earthwork) exhibit these qualities making them excellent candidates for this technique. However, these features likely consist of, or exist within, clay (Webb and Snow 1945:17-21). This specific matrix is not always good for GPR surveys because moisture within clay causes a high relative soil dielectric (RDP) that attenuates the GPR signal. However, successes have been achieved in clay (Conyers 2004:50-52, Weaver 2006). The development of our three-antenna data collection approach is a solution to this problem. This survey will be conducted using a Malå GeoScience RAMAC/GPR multi-channel CUII control unit, XV11 monitor, as well as 500, 250, and 100 mhz antennas. Collecting and merging GPR data from three increasing antenna strengths (500, 250, and 100 mhz) to look at distinctly different ground depths is an innovative application of this technology. The advanced application of GPR technology proposed for this research is being supported by Dr. Dean Goodman. Goodman is Ph.D-level geophysicist that specializes in GPR technology and applications, in addition to creating of the worlds leading GPR processing software, GPR-Slice. Goodman has agreed to write new computer code and processing functions into GPR-Slice software to accommodate merging the 3-antenna GPR datasets planned for collection with this research.

In the third phase, we will utilize electrical resistance tomography (ERT) to do a 3D investigation of the Nelson-Gay Mound searching for the internal structures targeted in the GPR survey. The AGI SuperSting R8 IP 8 channel memory earth resistivity and IP meter will be used for the ERT investigations. Though this technique has not been widely used in North American archaeology, ERT applications have been successful abroad to map internal variations in burial mounds, buried buildings, and barrows (Astin et al. 2007, Nuzzo et al. 2009, Tonkov and Loke 2006). This geophysical technique has the possibility to reveal internal variations not detected by the GPR survey and can be used in conjunction with the GPR survey as a comparative tool for anomalies corresponding to both datasets.

DISCUSSION OF THE SUBMITTED BUDGET

The budget accompanying this grant proposal takes into account salary for the principal investigator (PI) and a field technician. Travel expenses include only the mileage from Oxford, Mississippi to Lexington, Kentucky. Per diem will not be charged to the project. Fieldwork will take place over two weeks in the late spring or early summer of 2011. The subsequent data processing and report preparation will be completed over four weeks following fieldwork by the PI. The institutional match for this project will consist of seven days of salary for the Co-PI. The Co-PI has been instrumental in the planning of this project, will oversee the administration of the project and will provide assistance in data processing and advice on interpretations. Additionally, all geophysical equipment and processing software is being provided by institutions such as The Center for Archaeological Research at The University of Mississippi, The National Center for Physical Acoustics at the University of Mississippi, and the William S. Webb Museum of Anthropology at The University of Kentucky at no charge to the project. The total amount requested in this grant application is $8, 881.49, and the in-kind match totals $6,098.50.

BROADER CONTRIBUTIONS OF THE PROJECT

This research addresses goals outlined by Applegate (2008:552-553) in the state plan for Woodland research in Kentucky. Specific goals addressed partially or in full by this research include the following:

- Identify inter-regional variation in Early, Middle, and Late Woodland mortuary practices and investigate how changes in social organization are reflected in mortuary patterns.
- Use geophysical techniques at mound sites to delineate associated features, such as postmold patterns and off-mound activity areas.
- Identify spatial variation in Woodland mortuary and ritual activities among sites, drainages, sections, and management areas.
- Examine Woodland earthworks and other sites for evidence of archaeoastronomy.

This research also promotes the following goals of the Kentucky Native American Heritage Commission as outlined online at http://www.heritage.ky.gov/knahc/ (accessed 9/16/2010).

- To develop and promote an accurate depiction of Native Americans through media relations, research, and educational programs.
- To promote conservation and preservation of the cultures, ideals, and artifacts of Native Americans in Kentucky.

The Nelson-Gay Mound is a cultural sensitive property because it is a burial mound. The location of the mound is legally withheld to maintain its protection from looting. We do not wish to exclude any persons in this project for any reasons. However, because of the sensitive location and nature of the archaeological site this project takes place at, we will not be notifying the public that this project is taking place. We will also not be inviting the public to take place in this project. For these reasons, we do not feel that filing the Civil Rights Compliance Grid is applicable to this project. If it is necessary that we do so in the future of this granting process we would be happy to do so. The Civil Rights Compliance information from the University of Mississippi can also be made available to reviewers of this grant should it be needed. This being said, we do want to make the results of this research available to the public. We plan on accomplishing this by giving presentations on this research at professional meetings, submitting this research for publication in a peer-reviewed journal, and providing the report on these findings to KHC for placement on their website for download. However, any information placed in an arena where the public can have access to this research must be devoid of locational information that could be used to access the Nelson-Gay Mound.

As one of the best preserved Adena mound sites in Kentucky and the middle Ohio River valley, Nelson-Gay has been of interest to archaeologists since the Great Depression. The courageous actions of past and present landowners have ensured that this site will remain in its

current state for years to come. In this sense, non-invasive geophysical investigations has to be the first step in examining the mound in order to maintain the preservation and conservation ideals significant to this site. By identifying internal structures, we will finally gain an initial understanding of this mounds use in the Adena mortuary paradigm. Successfully applying geophysical techniques outlined above at Nelson-Gay Mound will provide a methodological standard for non-invasively investigating other burial mounds. The success of these methods also has the potential to be adopted by Kentucky and other states as a means to effectively manage and administer culturally sensitive archaeological sites with no-excavation type easements, while still gaining an understanding of them archaeologically and anthropologically.

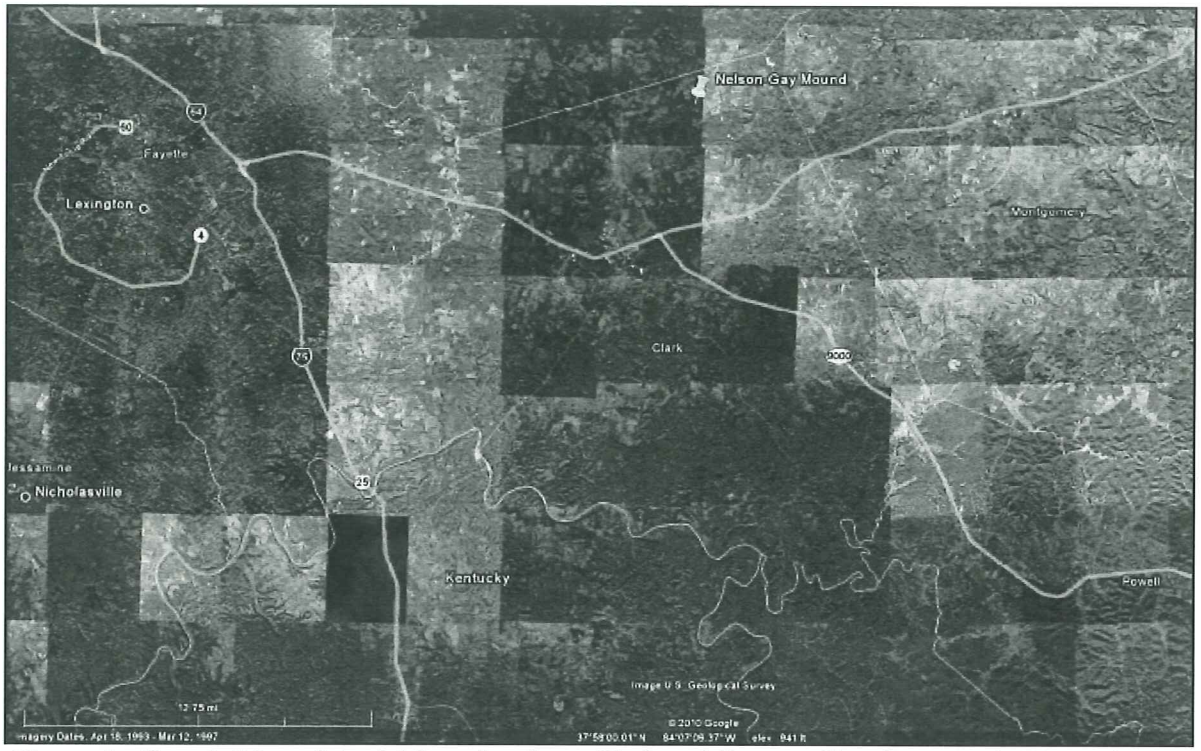

Figure 1. Google Map of Aerial Imaging from Clark and Surrounding Counties in Kentucky. Nelson-Gay Mound is Denoted by Yellow Push-Pin in the Northwestern Corner of Clark County. North is Oriented to the Top of the Map.

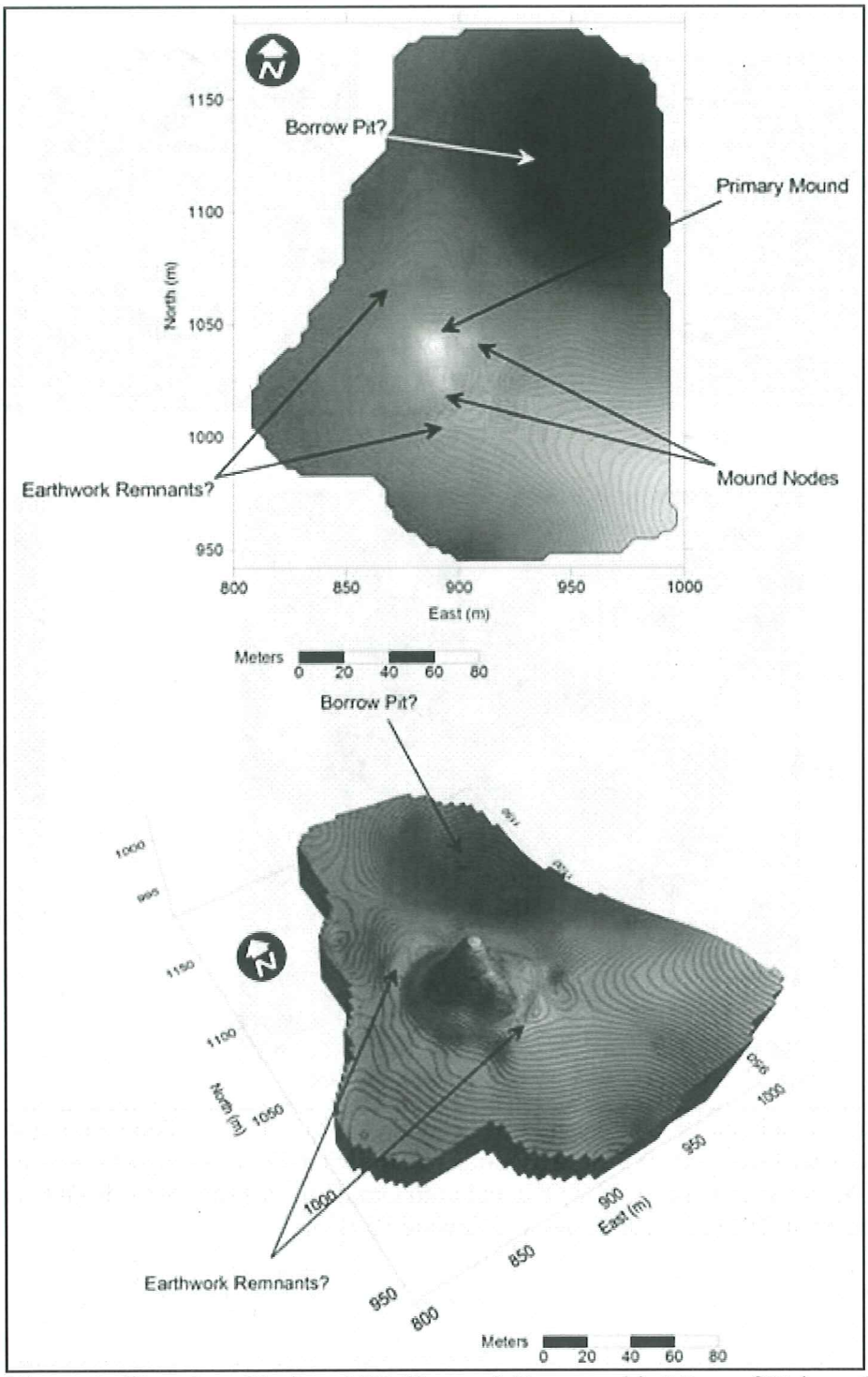

Figure 2. Planview (Top) and 3D (Bottom) Topographic Maps of Nelson-Gay Mound.

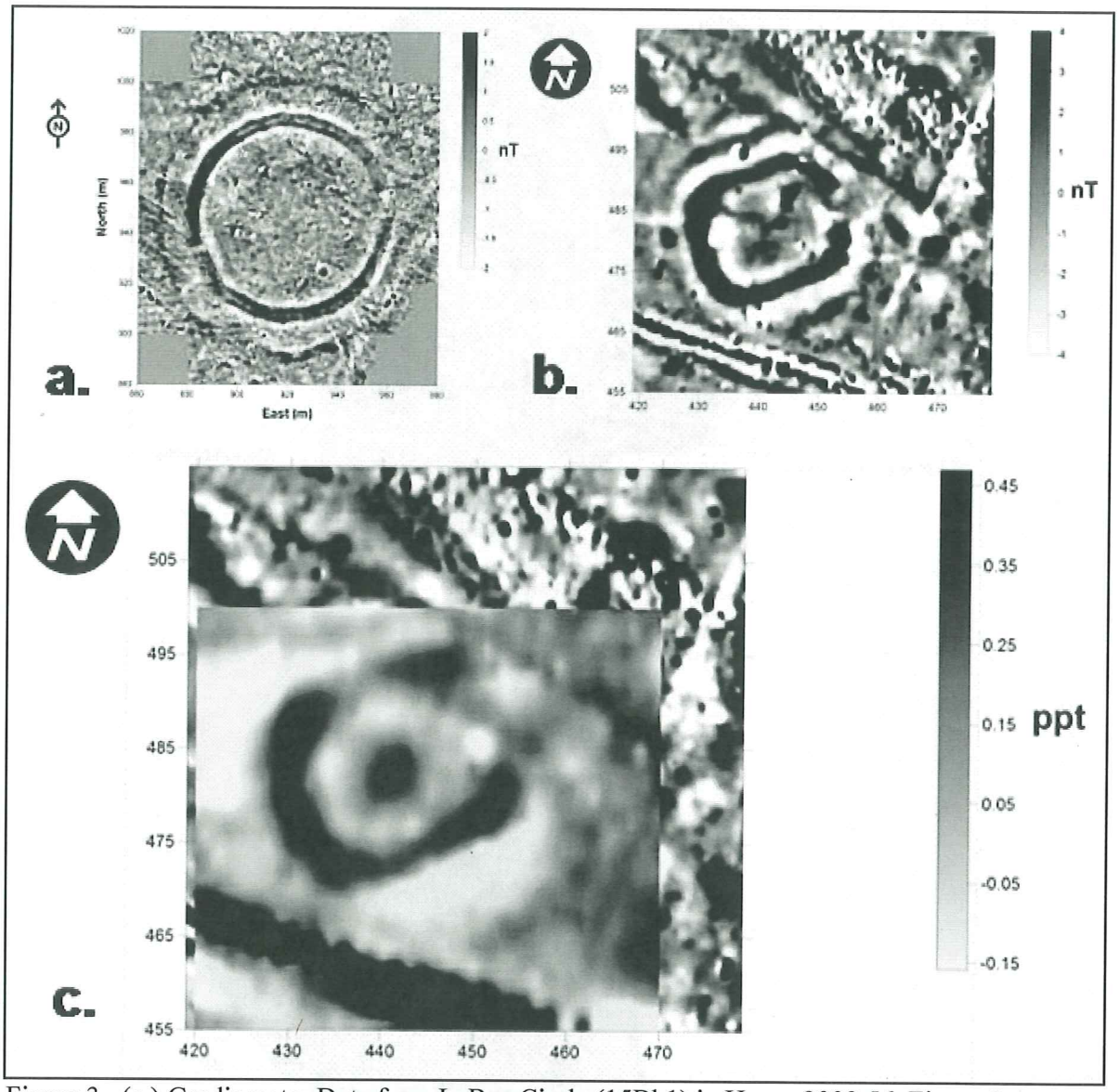

Figure 3. (a.) Gradiometer Data from LeBus Circle (15Bb1) in Henry 2009:56, Figure 2.4. (b.) Gradiometer Data from Winchester Farms Circle (15Fa1D). (c.) Magnetic Susceptibility Data from Winchester Farms Circle Overlaid onto Gradiometer Data. Maps from b. and c. Used Here Courtesy of Richard W. Jefferies and Edward R. Henry

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Curriculum Vitae

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erhenry@olemiss.edu

POSITION TITLE

Research Associate, Coordinator of Remote Sensing Applications
University of Mississippi Center for Archaeological Research

EDUCATION

Master of Arts in Anthropology
July 2009
Department of Sociology and Anthropology
University of Mississippi, Oxford
Thesis Title: *Geophysical Prospection and Excavation at an Early Woodland Ceremonial Circle in Bourbon County, Kentucky.* (Advisor: Dr. Jay K. Johnson)

Bachelor of Arts in Secondary Education (History/Anthropology)
December 2004 (Cum Laude)
Department of Education
University of Kentucky, Lexington

WORK EXPERIENCE

Project Director

August 2010

Conducted Geophysical Investigations at the Winchester Farms Earthwork, Adjacent to Mount Horeb (15Fa1). Fayette County, Kentucky. Center for Archaeological Research, University of Mississippi, Oxford. Principal Investigator: Dr. Richard Jefferies (University of Kentucky) (2 days)

Project Director cont.
June through August 2010

Conducted Geophysical Investigations at Four Sites along the Mississippi Gulf Coast in Conjunction with Hurricane Katrina Salvage Excavations Undertaken by Various Academic Institutions. Center for Archaeological Research, University of Mississippi, Oxford. Principal Investigator: Dr. Jay K. Johnson (12 weeks)

July 2010

Conducted Geophysical Survey of the Fox Farm Site in Conjunction with the 2010 University of Kentucky Field School in Archaeology. Center for Archaeological Research, University of Mississippi, Oxford. Principal Investigator: Dr. David Pollack (University of Kentucky) (1 day)

February 2010

Directed Archaeological Testing of Sites within a Proposed Natural Habitat Restoration Area along the Buttahatchee River Drainage for Wildlife Mississippi, Amory, Mississippi. Jay K. Johnson Consulting, Oxford, Mississippi. Principal Investigator: Dr. Jay K. Johnson (1 week, 3 days)

January 2010

Directed a Phase I Survey of the Proposed Golden Triangle Industrial Park, Columbus, Mississippi. Jay K. Johnson Consulting, Oxford, Mississippi. Principal Investigator: Dr. Jay K. Johnson (2 weeks)

November through December 2009

Directed the Water Screening of Soil from Site 22LE1045 and Oversaw Subsequent Flotation of Specific Samples, Tupelo, Mississippi. Jay K. Johnson Consulting, Oxford, Mississippi. Principal Investigator: Dr. Jay K. Johnson (4 weeks)

September 2009

Monitored Backhoe Stripping of Highway 6 Sewer Pipeline in Tupelo, Mississippi. Jay K. Johnson Consulting, Oxford, Mississippi. Principal Investigator: Dr. Jay K. Johnson (2 weeks)

July 2009

Conducted Limited Geophysical Investigations at the Mount Horeb Earthwork (15Fa1) Fayette County, KY. Personal Research. Principal Investigator: Edward R. Henry (1 day)

Project Director cont.

Conducted Geophysical Investigations on Mound C at Winterville Mounds State Park, Greenville, Mississippi for the 2009 University of Southern Mississippi Archaeological Field School. Center for Archaeological Research, University of Mississippi, Oxford. Principal Investigator: Dr. H. Edwin Jackson (4 days)

June through October 2008

Conducted Master's Thesis Research-Based Geophysical Survey and Excavations at an Early Woodland Circular Earthwork, LeBus Circle (15BB01) in Bourbon County, Kentucky. Principal Investigator: Dr. Jay K. Johnson (16 Weeks)

August 2007

Directed a Ground Penetrating Radar and Resistivity Survey of the Saint Francis Mission Cemetery, Scott County, Kentucky. Kentucky Archaeological Survey Principal Investigator: Dr. David Pollack (1 Week)

May 2007

Directed a Ground Penetrating Radar and Resistivity Survey of the Churchill Family Cemetery, Jefferson County, Kentucky. Kentucky Archaeological Survey Principal Investigator: Dr. David Pollack (2 Weeks).

April 2007

Directed a Phase I Survey of a Proposed Surface Mining Coal Extraction Area in Harlan County, Kentucky. UK-PAR, Lexington. Principal Investigator: Dr. Steven R. Ahler (2 Days)

March 2007

Directed a Phase I Survey of a Proposed Waste Disposal Area Associated with a Railroad Bridge Replacement in Boone County, Kentucky. UK-PAR, Lexington. Principal Investigator: Dr. Steven R. Ahler (2 Days)

Directed a Phase I Survey of the Proposed Right-of-Way Associated with a Road Realignment in Campbell County, Kentucky. UK-PAR, Lexington. Principal Investigator: Dr. Steven R. Ahler (2 Days)

Project Director cont.
February 2007

Directed a Phase I Survey of a Proposed Bridge Replacement in Grant County, Kentucky. UK-PAR, Lexington. Principal Investigator: Dr. Steven R. Ahler (1 Day)

November 2006

Directed a Phase I Survey of Newly Acquired Property Adjacent to the Mulkey Meeting House State Historic Site, Monroe County, Kentucky. Kentucky Archaeological Survey, Lexington. Principal Investigator: Dr. David Pollack (1 Day)

October 2006

Directed a Phase I Archaeological Survey of a Proposed Surface Mining Extraction Site, Daviess County, Kentucky. UK-PAR, Lexington. Principal Investigator: Dr. Steven Ahler (1 Day)

June 2006

Directed a Phase I Survey of Coolavin Park, Fayette County, Kentucky. UK-PAR, Lexington. Principal Investigator: Dr. Steven R. Ahler (2 Days)

Selected Projects as a Field Crew Leader

July 2009

Conducted Geophysical Investigations at the Carson Site in Conjunction with the 2009 University of Mississippi Archaeological Field School. Center for Archaeological Research, University of Mississippi, Oxford. Principal Investigator: Dr. Jay K. Johnson (4 weeks)

June 2008

Geophysical Survey of Two Prehistoric Sites in Cumberland County, Kentucky. Kentucky Archaeological Survey, Lexington. Principal Investigator: Dr. David Pollack (2 Days)

June 2007

Ground Penetrating Radar Survey of a Possible Mass Grave Associated with the Civil War Battle of Munfordville, Hart County, Kentucky. Kentucky Archaeological Survey, Lexington. Principal Investigator: Dr. David Pollack (1 Day)

Field Crew Leader cont.
December 2006

Phase III Excavations of an Early Nineteenth Century Farmstead in Harrison County, Kentucky. Kentucky Archaeological Survey, Lexington. Principal Investigator: Dr. Stephen McBride (4 Weeks)

July through September 2006

Phase II Archaeological Excavations on the Early to Middle Woodland period Evans site in Madison County, Kentucky. Kentucky Archaeological Survey, Lexington. Principal Investigator: Principal Investigator: Dr. David Pollack (8 Weeks)

September 2006

Geophysical Survey of the Prather Property at Raven Run Nature Sanctuary, Fayette County, Kentucky. Kentucky Archaeological Survey, Lexington. Principal Investigator: Dr. David Pollack (1 Week)

October 2005

Geophysical Survey of Walnut Hills Methodist Church Cemetery, Fayette County, Kentucky. Kentucky Archaeological Survey, Lexington. Principal Investigator: Dr. David Pollack (1 Week)

Selected Projects as an Archaeological and Geophysical Remote Sensing Field Technician

October 2009

Conducted Geophysical Survey of the Feltus Site near Natchez, Mississippi. Center for Archaeological Research, University of Mississippi, Oxford. Principal Investigator: Dr. Jay K. Johnson (2 Days)

Conducted A Geophysical Survey of the Grand Village of the Natchez Indians in Natchez, Mississippi. Center for Archaeological Research, University of Mississippi, Oxford. Principal Investigator: Dr. Jay K. Johnson (1 Day)

June 2008

Conducted Geophysical Prospection Survey of the Carter Robinson Mound Site (44LE10) Lee County, VA. Kentucky Archaeological Survey, Lexington. Principal Investigator: Dr. Richard W. Jefferies (5 Days)

Field Technician cont.
May 2007

Conducted Phase III Excavations on the Remnants of a Mississippian Mound, Trigg County, Kentucky. Kentucky Archaeological Survey, Lexington. Principal Investigator: Dr. David Pollack (2 Weeks)

January 2007

Surveyed the Upper Salts Cave Passages for Petroglyphs and Pictographs, Mammoth Cave National Park, Edmonson County, Kentucky. William S. Webb Museum of Anthropology, University of Kentucky. Principal Investigator: Dr. George M. Crothers (1 Day)

December 2006

Documented Historic Saltpeter Mining and Prehistoric Gypsum and Selenite Mining of Carpenter Cave, Allen County, Kentucky. Kentucky Archaeological Survey, Lexington. Principal Investigator: Dr. David Pollack (2 days)

October 2006

Preliminary Prehistoric and Historic Survey of Carpenter Cave, Allen County, Kentucky. Kentucky Archaeological Survey, Lexington. Principal Investigator: Dr. David Pollack (1 Day)

July 2006

Conducted Geophysical Survey on a Mission Period Native American Settlement Site on Sapleo Island, GA. Principal Investigator: Dr. Richard W. Jefferies (1 Week)

July 2005

Public Archaeology Demonstration of Geophysical Techniques for the 2005 University of Kentucky Field School in Archaeology. Principal Investigator: Dr. Stephen McBride (1 Day)

May 2004

Geophysical Survey of Annis Mound for Pennsylvania State University Ph. D. Candidate Scott Hammerstedt, Butler County, Kentucky. Principal Investigator: Dr. George Milner (1 Week)

Field Technician cont.
June through July 2003

University of Kentucky Field School in Archaeology: Sapelo Island, McIntosh County, Georgia. Principal Investigator: Dr. Richard W. Jefferies (8 Weeks)

TECHNICAL REPORTS

Henry, Edward R.

2007a Phase I Archaeological Survey of a Waste Disposal Area Associated with a Railroad Bridge Replacement in Boone County, Kentucky. Technical Report No. 578 University of Kentucky Program for Archaeological Research.

2007b Archaeological Assessment of a Proposed Coal Extraction Area in Harlan County, Kentucky in the Kelly Branch Drainage. Technical Report No. 584 University of Kentucky Program for Archaeological Research.

2007c An Archaeological Survey of the Proposed Stringtown Bridge Replacement in Grant County, Kentucky. Technical Report No. 576 University of Kentucky Program for Archaeological Research.

2006a A Phase I Archaeological Investigation of a 9.2 Ha Tract Adjacent to the Mulkey Meeting House State Historic Site, Monroe County, Kentucky. Report No. 138 Kentucky Archaeological Survey, Lexington.

2006b A Geophysical Survey of the Prather Property at Raven Run Nature Sanctuary, Fayette County, Kentucky. Report No. 139 Kentucky Archaeological Survey, Lexington.

2006c An Archaeological Assessment of a Proposed Surface Mining Coal Extraction Area In Daviess County, Kentucky. University of Kentucky Program for Archaeological Research Technical Report No. 571 University of Kentucky Program for Archaeological Research, Lexington.

Henry, Edward R. and George M. Crothers

2007 Archaeological Investigations at Cave Site 15AL22, Allen County, Kentucky. Report No. 141 Kentucky Archaeological Survey, Lexington.

Henry, Edward R. and C. Brian Mabelitini

2006 A Phase I Archaeological Survey of Coolavin Park, Lexington, Fayette County, Kentucky. University of Kentucky Program for Archaeological Research Technical Report No. 565 University of Kentucky Program for Archaeological Research, Lexington.

Johnson, Jay K. and **Edward R. Henry**
2010 An Archaeological Investigation of Two Land Tracts Along the Buttahatchee River, Monroe County, Mississippi. Report Prepared for Wildlife Mississippi.

Schlarb, Eric J. and **Edward R. Henry**
2005 An Archaeological Assessment of the Perkins and Bissell Tracts, Livingston County, Kentucky. Report No. 105 Kentucky Archaeological Survey, Lexington.

Stottman, M. Jay and **Edward R. Henry**
2007 A Geophysical Survey of the Churchill Family Cemetery, Jefferson County, Kentucky. Letter Report Issued to the Jefferson County Board of Education by the Kentucky Archaeological Survey, July 2007

Winter, Susanne L. and **Edward R. Henry**
2006 An Archaeological Assesment of a 12.1 Ha Tract, William Whitley Property, Lincoln County, Kentucky. Report No. 112 Kentucky Archaeological Survey, Lexington.

CONFERENCE PAPERS AND POSTERS PRESENTED

2010

The Archaeology of the LeBus Circle and Some Comments on the Implications of Large Early Woodland Circular Earthen Enclosures in the Ohio Valley. By Edward R. Henry. Paper Presented at the 75th Anniversary Meeting of the Society for American Archaeology. St. Louis, Missouri.

Revisiting Webb's Old Friend Mount Horeb: New Research at an Early Woodland Earthwork in Fayette County, Kentucky. By Edward R. Henry and George M. Crothers. Paper Presented at the 2010 Kentucky Heritage Council Conference. Cumberland Falls State Resort Park, Kentucky.

2009

Down-Hole in the Delta: Magnetic Susceptibility Studies at the Carson Site. By Edward R. Henry, Kelsey M. Lowe, Aaron S. Fogel, and John M. Cappleman. Paper Presented at the 66th Annual Southeastern Archaeology Conference. Mobile, Alabama.

Determining the Chronology of the LeBus Circle, Bourbon County, Kentucky. By Edward R. Henry. Paper Presented at the 2009 Kentucky Heritage Council Archaeological Conference. Murray State University. Murray, Kentucky.

Papers and Posters cont.
2008

Searching for Signs of Ceremony: Geophysical Remote Sensing at an Adena Earthen Enclosure in Bourbon County, Kentucky. By Edward R. Henry. Paper Presented at the 65th Annual Southeastern Archaeology Conference. Charlotte, North Carolina.

Geophysical Prospection on the Mississippian Frontier: 2007 Survey Results from the Carter Robinson Mound Site (44LE10). By Edward R. Henry, Maureen E. Meyers, and Christopher R. Moore. Poster Presented at the 73rd Annual Society for American Archaeology Conference. Vancouver, British Columbia, Canada.

2007

The Archaeology of 15AL22 and Early Woodland Gypsum Mining in the Mid-South. By George M. Crothers and **Edward R. Henry.** Paper Presented at the 64th Annual Southeastern Archaeology Conference. Knoxville, Tennessee.

A New Look at the Archaeology of Cave Site 15AL22, Allen County, Kentucky. By Edward R. Henry and George M. Crothers. Paper Presented at the 2007 Kentucky Heritage Council Archaeological Conference. Natural Bridge State Park, Kentucky.

A Ground Penetrating Radar Survey of an Early Nineteenth Century Farmstead in Lexington, Kentucky. By Edward R. Henry and Philip B. Mink II. Paper Presented at the 2007 Indiana Archaeological Council Conference. Strawtown Koteewi Park, Indiana.

2006

Ground Penetrating Radar and Heritage Resource Management on an Early Nineteenth Century Homestead in Lexington, Kentucky. By Edward R. Henry, Philip B. Mink II, and Cherlyn A. Clark. Poster Presented at the 63rd Annual Southeastern Archaeological Conference. Little Rock, AR.

Prehistoric Kentuckians and Energy. Exhibit Made for Display at the 2006 Kentucky State Fair, Louisville, Kentucky. Currently on Display at the W.S. Webb Museum of Anthropology, Lafferty Hall, University of Kentucky Main Campus, Lexington, Kentucky. (Co-authored text and assisted in Design and Layout.)

GRANTS AWARDED

2009

Kentucky Organization of Professional Archaeologists Research Grant. $500

Grants Awarded cont.
2008

University of Mississippi Graduate Student Council Fall 2008 Research Grant. $500

University of Mississippi Graduate School Summer 2008 Dissertation/Thesis Enhancement Grant. $2500

ACADEMIC AWARDS

(2004) Graduated Cum Laude from the University of Kentucky.

PROFESSIONAL MEMBERSHIPS

Member of the Society for American Archaeology (SAA)

Member of the Southeastern Archaeological Conference (SEAC)

Member of the Kentucky Organization of Professional Archaeologists (KYOPA)

Member of the Mississippi Archaeological Association (MAA)

ARCHAEOLOGICAL EXPERTISE

Geophysical Remote Sensing Equipment

AGI Instruments SuperSting R8 IP 8 Channel Memory Earth Resistivity and IP Meter

Bartington Instruments Grad601-2 Dual Fluxgate Gradiometer

Bartington Instruments, Inc. MS2 Magnetic Susceptibility System (Including the MS2B Laboratory Sensor and the MS2H Down-hole Sensor)

Exploranium KT9 Kappameter Magnetic Susceptibility Meter

Geophysical Survey Systems, Inc. SIR-3000 Ground Penetrating Radar Unit

Geophysical Survey Systems, Inc. SIR-2000 Ground Penetrating Radar Unit

Geoscan Research RM15 Resistivity System with the MPX15 multiplexer

Geoscan Research FM256 and FM36 Fluxgate Gradiometers

Expertise cont.

Geonics EM-38B Conductivity and Magnetic Susceptibility System

Mala Geoscience Ramac Ground Penetrating Radar CU II Geo System

Mapping Transits

Leica TR307R and TR305 Total Stations

Geophysical Data Processing and Other Computer Software

GPR Slice

GPR Process and GPR Convert

ArchaeoSurveyor 3D

ArchaeoSurveyor

Geoplot 3.0

Voxler

Res2D Resistivity Inversion Software

AGI EarthImager 2D and 3D Resistivity Inversion Software

Surfer 8 and 9 Terrain and Surface Modeling

Microsoft Office 2003-2008 (Windows and Mac)

Adobe Illustrator CS 3

Adobe Photoshop CS 3

PERSONAL INTERESTS

Outdoor Activities (Soccer, Mountain Biking, Backpacking, Snowboarding, Kayaking/Canoeing, Fishing)

Photography

REFERENCES

Dr. Jay K. Johnson (Professor of Anthropology)
University of Mississippi
211 Leavell Hall
University, MS 38677
(662) 915-7339
sajay@olemiss.edu

Dr. Richard W. Jefferies (Professor of Anthropology)
University of Kentucky
204A Lafferty Hall
Lexington, KY 40506
(859) 257-2860
rwjeff1@uky.edu

Dr. George Crothers (Associate Professor of Anthropology, Director of the W.S. Webb Museum of Anthropology, and Kentucky State Archaeologist)
Office of State Archaeology
1020A Export St.
Lexington, KY 40506
(859) 257-1944
gmcrot2@uky.edu

Dr. David Pollack (Adjunct Faculty, University of Kentucky Department of Anthropology; Director of the Kentucky Archaeological Survey)
Kentucky Archaeological Survey
1020A Export St.
Lexington, KY 40506
(859) 257-1944
david.pollack@uky.edu

Curriculum Vitae

Jay K. Johnson
Department of Sociology and Anthropology
University of Mississippi
University, MS 38677
(662) 915-7339 Office, (662) 236-1720 Home
sajay@olemiss.edu

Personal Data

Born January 7, 1947, Sacramento, California
Married, two children
Military Service, U.S. Army, November 1969-August 1971

Academic Record

B.A. (with honors), Florida State University, 1965-1969
Major: Anthropology
Undergraduate Honors Thesis: Two Sites on the St. Marks Wildlife Refuge.

Ph.D. Southern Illinois University at Carbondale, 1971-1976.
Major: Anthropology
Dissertation: Chipped Stone Artifacts from the Western Maya Periphery.

Professional Positions

Professor of Anthropology and Director of the Center for Archaeological Research, University of Mississippi, July 2001-Present.

Professor of Anthropology and Associate Director of the Center for Archaeological Research, University of Mississippi, July 1988-July 2001.

Associate Professor of Anthropology and Associate Director of the Center for Archaeological Research, University of Mississippi, July 1983-July 1988.

Assistant Professor of Anthropology and Associate Director of the Center for Archaeological Research, University of Mississippi, February 1981-July 1983.

Assistant Professor of Anthropology, University of Mississippi, July 1977-February 1981.

Research Associate in Anthropology, University of Mississippi, September 1976-July 1977.

Field Work

Archaeology

Snow Beach Site, Florida, 1967, 1968.
West Headquarters Mound, Florida, 1969.
Velda Mound, Florida, 1969.
Cedar Creek Drainage, Illinois, 1972.
Palenque Region, Chiapas, Mexico, 1973.
Lake Yaxha Region, El Peten, Guatemala, 1974.
Obion River Drainage, Tennessee, 1975.
Palenque Region, Chiapas, Mexico, 1976.
Yazoo Basin, Mississippi, 1979.
Tallahatchie River Drainage, Mississippi 1980.
Natchez Bluffs Region, Mississippi, 1981.
Line Creek Drainage, Mississippi, 1982.
Yocona River Drainage, Mississippi, 1983.
Chuquatonchee Creek Drainage, Mississippi 1983.
Pickwick Basin, Alabama, 1984.
Yazoo Basin, Mississippi, 1984.
Clay County, Mississippi, 1989.
Meadowbrook Site, Lee County, Mississippi, 1990.
Oliver Site, Coahoma County, Mississippi, 1990-1991.
Batesville Mounds, Panola County, Mississippi, 1992.
North Central Hills, Mississippi, 1985-1993.
Upper Yazoo Basin, Mississippi, 1993-1994.
Batesville Mounds, Panola County, Mississippi, 1996.
Hollywood Site, Tunica County, Mississippi, 1997- 2001.
Old Mobile, Alabama, 2001, 2004.
Sapelo Island, Georgia, 2002, 2003
Parchman Place Mounds, Coahoma County, Mississippi, 2002-2006.
Highway 6 Bypass, Pontotoc and Lee Counties, Mississippi, 2005- 2008
Cedarscape Site Assessment, Lee County, Mississippi, 2007-2008
Carson Mounds, Coahoma County, Mississippi, 2008-2010.
Geophysical Survey on the Mississippi Gulf Coast, 2010.

Ethnography

Dutch Ridge, Illinois, 1973.

Fellowship and Honors

Graduate Fellow, Department of Anthropology, Southern Illinois University, September 1971-September 1972.
Phi Kappa Phi Honor Society, Local Chapter President 1993-1994.
Editorial Board, *Mississippi Archaeology* 1993-1996.
Society for American Archaeology, Award for Excellence in Lithic Studies, 1996.
Distinguished Faculty Fellow, College of Liberal Arts 2006-2009

Professional Societies

American Anthropological Association, Publications Director, Archaeology Division 1998-2004
Society for American Archaeology, Committee on Finance 2001-2003, Committee on Award for Excellence in Archaeological Analysis, Chair 2008
Southeastern Archaeological Conference, Treasurer 1992-1995, Executive Officer 1998-2001, Chair of Nominations Committee 2001, 2004
Mississippi Association of Professional Archaeologists, President 1984
Mississippi Heritage Trust Board Member, 1992-1994
Mississippi Historic Preservation Professional Review Board, 1996-present, Vice Chair 1997, Chair 1998, 2009

Books

1987 *The Organization of Core Technology* (edited with Carol A. Morrow). Westview Press, Boulder.

1993 *The Development of Southeastern Archaeology* (edited volume). University of Alabama Press, Tuscaloosa.

2006 *Remote Sensing in Archaeology: An Explicitly North American Perspective* (edited volume). University of Alabama Press.

Monographs

1981 *Lithic Procurement and Utilization Trajectories: Archaeological Survey and Excavations, Yellow Creek Nuclear Power Plant Site, Tishomingo County, Mississippi, Vol. I.* (with Robert M. Thorne and Bettye J. Broyles) Center for Archaeological Research, University of Mississippi, Archaeological Papers. 1.

1981 *Lithic Procurement and Utilization Trajectories: Analysis, Yellow Creek Nuclear Power Plant Site, Tishomingo County, Mississippi, Vol. II.* Center for Archaeological Research, University of Mississippi, Archaeological Papers. 1.

1983 *Excavations at the Mud Island Creek Archaeological Complex and the Gordon Mounds Site, Jefferson County, Mississippi* (with Abigayle Robbins and John T. Sparks). Center for Archaeological Research, University of Mississippi, Archaeological Papers, 4.

1985 *Cultural Resources Survey and Testing in Colbert Ferry Park, Alabama* (with Bettye J. Broyles). Center for Archaeological Research, University of Mississippi, Archaeological Papers, 6.

2002 *The 1996 Excavations at the Batesville Mounds: A Woodland Period Platform Mound Complex in Northwest Mississippi* (with Gena M. Aleo, Rodney T. Stuart, and John Sullivan). Mississippi Department of Archives and History, Archaeological Report No. 32.

Selected Articles on Woodland Archaeology and Remote Sensing

1983 The Three Faces of Gordon: Ceramic Site Sampling at the Gordon Mounds in Jefferson County, Mississippi (with John T. Sparks). *Southeastern Archaeology* 1(2):103-114.

1983 Prehistoric Subsistence in the Natchez Bluffs, Jefferson County, Mississippi (with Abigayle Robbins and Andrea B. Shea). *Mississippi Archaeology* 18(2):4-12.

1987 The Thelma Mounds in Northeast Mississippi (with James R. Atkinson). In *The Emergent Mississippian: Proceedings of the Sixth Midsouth Archaeological Conference, June 6-9, 1985*, edited by Richard A. Marshall, pp. 63-70. Cobb Institute of Archaeology, Mississippi State University.

1988 Woodland Settlement in Northeast Mississippi: The Miller Tradition. In *Middle Woodland Settlement and Ceremonialism in the Midsouth*, edited by Robert C. Mainfort. Mississippi Department of Archives and History, Archaeological Report 22:49-59.

1988 Remote Sensing and GIS Analysis in Large Scale Survey Design in North Mississippi (with Tom L. Sever, Scott L. H. Madry and Harry T. Hoff). *Southeastern Archaeology* 7(2):124-131.

1995 Shifting Patterns of Long Distance Contact During the Middle Woodland Period in the Northern Yazoo Basin, Mississippi (with Fair Hays). In *Native American Interactions: Multiscalar Analyses and Interpretations in the Eastern Woodlands*, edited by Michael S. Nassaney and Kenneth E. Sassaman, pp. 100-121. University of Tennessee Press, Knoxville.

1996 Delta Digitizing: GIS and Remote Sensing in Northwest Mississippi. In *New Methods, Old Problems: Geographic Information Systems in Modern Archaeological Research*, edited by Herbert D.G. Maschner, pp. 242-251. Center for Archaeological Investigations, S.I.U., Occasional Paper No. 23.

2001 An Obituary: The Twin Lakes Phase. *Mississippi Archaeology* 36:17-36.

2001 Middle Eastern Woodland, Copena, Miller, Swift Creek, Bynum, Mandeville, Pinson, Walling. In *Encyclopedia of Prehistory*, edited by Peter N. Peregrine, pp. 322-334. Plenum Press, New York.

2003 Remote Sensing Technologies in Cultural Resource Management Archaeology (with Bryan S. Haley). In Proceedings of SPIE Vol. 4881 *Sensors, Systems, and Next-Generation Satellites VI,* edited by Hiroyuki Fujisada, Joan B. Lurie, Michelle L. Aten, and Konradin Weber, pp. 648-659. SPIE, Bellingham, Washington.

2004 Multiple Sensor Applications in Archaeological Geophysics (with Bryan S. Haley). In Proceedings of SPIE Vol. 5234, *Sensors, Systems, and Next-Generation Satellites VII,*

edited by Roland Meynart, Steven P. Neeck, Haruhisa Simoda, Joan B. Lurie, and Michelle L. Aten. pp. 688-697. SPIE, Bellingham, Washington.

2004 The Sapelo Shell Rings: Remote Sensing on a Georgia Sea Island (Victor D. Thompson, Matthew D. Reynolds, Bryan Haley, Richard Jefferies, Jay K. Johnson, and Laura Humphries). *Southeastern Archaeology* 23(2):192-201.

2006 Introduction. In *Remote Sensing in Archaeology: An Explicitly North American Perspective*, edited by Jay K. Johnson, pp. 1-16. University of Alabama Press, Tuscaloosa.

2006 A Cost Benefit Evaluation of Remote Sensing Applications (with Bryan S. Haley). In *Remote Sensing in Archaeology: An Explicitly North American Perspective*, edited by Jay K. Johnson, pp. 33-46. University of Alabama Press, Tuscaloosa.

2006. Integration and Interpretation of Multiple Instrument Applications (Kenneth L. Kvamme, Jay K. Johnson, and Bryan S. Haley). In *Remote Sensing in Archaeology: An Explicitly North American Perspective*, edited by Jay K. Johnson, pp. 205-234. University of Alabama Press, Tuscaloosa.

2006 A Comparative Guide to Application. In *Remote Sensing in Archaeology: An Explicitly North American Perspective*, edited by Jay K. Johnson, pp. 305-320. University of Alabama Press, Tuscaloosa.

2007 Mapping the Chickasaw with Integrated Magnetic Geophysics (Bryan S. Haley and Jay K. Johnson). *Studijne Zvesti Archeologickeho Ustavu SAV 41, Special Theme: Archaeological Prospection.* 179-181.

2008 Archaeological Remote Sensing Research in the Yazoo Basin; A History and Evaluation. In *Time's River: Archaeological Syntheses in the Yazoo Basin and Lower Mississippi River Valley*, edited by Janet Rafferty and Evan Peacock, pp. 344-356. University of Alabama Press, Tuscaloosa.

Grants and Contracts Related to Woodland Archaeology and Remote Sensing

Test excavations and data recovery operations at the Mud Island Creek Archaeological Complex and the Gordon Mounds Site. National Park Service, $79,137 August 1981 to December 1985.

Cultural resources survey in the Line Creek, Upper Yocona River and Askalmore Creek Watersheds, Mississippi. Soil Conservation Service, $37,288, September 1982 to July 1984.

Cultural resources survey in the Chuquatonchee Creek Watershed, Mississippi. Soil Conservation Service, $10,642, July 1983 to May 1984.

Cultural resources survey and testing in Colbert Ferry Park, Alabama, National Park Service, $18,923, December 1983 to January 1986.

Baseline Archaeological Data Recovery at the Harmon Mounds Site (22PA500). Panola County Industrial Authority, $6,631, October 1990 to May 1992.

Archaeological Data Recovery at the Batesville Mounds. Mississippi Department of Transportation, $68,917, May 1996 to November 1999.

Remote Sensing, Ground Truth, and Public Outreach at the Hollywood Site, Tunica County, Mississippi. Mississippi Department of Archives and History, $109,999, October 1996 to January 2000.

The Utility of Low Cost Thermal Sensors in Archaeological Research. NASA, Mission to Planet Earth Initiative, $100,000, August 1998 to December 2002.

Support crew for GPR survey of the Hollywood Site. National Aeronautics and Space Administration, $4,000, June 1999 to December 1999.

The University of Mississippi Geoinformatics Center. NASA (co-principal investigator with Gregory L. Easson, Pamela Lawhead, and Stephen Threlkeld), $1,826,459, May 2000 to October 2005.

Geospatial Workforce Development, NASA (co-principal investigator with Pamela Lawhead), $9,000,000, August 2001 to October 2005.

Geophysical Survey at an Historic Cemetery. Coastal Environments, Inc. $2,015, November 2001 to December 2001.

Remote Sensing Surveys, Two Prehistoric Sites, U.S. Highway 165, Ouacita Parish, LA. Coastal Environments, Inc. $3,271, November 2001 to December 2001.

Remote Sensing Investigation of an Historic Cemetery. Engineering Associates, Inc., $2,177, April 2002 to May 2002.

Geophysical Investigations of the Liddell Family Cemetery. MSU/U.S. Department of Transportation, $3,735, May 2002 to June 2002.

Geophysical Investigations of Five Sites in Georgia. Georgia Department of Transportation, $6,996, June to August 2002.

Workshop on Remote Sensing and Archaeology. NASA, $29,938, begun August 2002.

A Geophysical Survey of Ft. Mims, Alabama. University of South Alabama, $6,999, June 2003 to November 2003.

A Geophysical Survey of a Portion of the Redwood Cemetery, Louisiana. SURA, Inc., $2,825, June 2003 to October 2003.

Geophysical Survey of Tiffany Pueblo, A Prehistoric Site in Socorro County, New Mexico. Statistical Research, Inc., $2,925, October 2003 to December 2003.

Geophysical Survey at CA-LAN-62, A Prehistoric Site in California. Statistical Research, Inc., $2,188, November 2003 to December 2003.

A Geophysical Survey of a Portion of the Strawberry Plains Plantation, Mississippi Audubon Society, $6,117, November 2003 to June 2004.

Geophysical Survey of a Portion of the Burnitt Site, Sabine Parish, Louisiana. Coastal Environments, Inc. $3,934, February 2004 to April 2004.

A Geophysical Survey of Highland Cemetery, Baton Rouge, Louisiana. Highland Cemetery Association, $2,469.55, February 2004 to May 2004.

A Search for Fort Wool Using Archaeological Geophysical Survey Techniques. Georgia Department of Transportation, $12,618.61, August 2004 to October 2004.

Site Survey and Evaluation along Selected Segments of the SR 6 Relocation in Pontotoc and Lee Counties, Mississippi. Mississippi Department of Transportation, $122,081, Begun November 2004.

Application of Complementary Geophysical Survey Techniques in the Search for Fort Louis at Old Mobile. University of South Alabama/U.S. Department of the Interior, $9,289.17, December 2004 to March 2005.

A Geophysical Survey of a Portion of a Prehistoric Site, 16OU2, in Louisiana. Surveys Unlimited Research Associates, Inc., $7,611.83, June 2005 to September 2005.

A Geophysical Survey of Jackson Barracks, Building Number 1, New Orleans. University of Northwestern Louisiana, $3,596.27, June 2005 to August 2005.

A Ground Penetrating Radar Survey of Memorial Cemetery, Ste. Genevieve, MO. Southwestern Missouri State University, $6,496.48, August 2005 to October 2005.

An Archaeological Examination of Belle Alliance Plantation Using Geophysical Techniques. Funded by the Property Owners, Bryce Rezeley and Alan Caspie, June 2005 to November 2005, $9,127.87.

The Search for the Hidden People of St. Michael's Cemetery. University of West Florida, $96,030, Begun October 2005.

Site Survey and Evaluation along Selected Segments of the SR 6 Relocation in Pontotoc and Lee Counties, Mississippi, Modification to Existing Contract. Mississippi Department of Transportation, $95,884, Begun September 2006.

A Geophysical Survey of the Winterville Mounds, Washington County, Mississippi. University of Southern Mississippi, $4,038, June 2006 to August 2006.

A Geophysical Survey of an Early 20th Century Cemetery, Limestone County, Mississippi. MRS Consultants, $5,702, June 2006 to August 2006.

A Gradiometer and Electromagnetic Survey of Two Archaeological Sites at the Tupelo Airport, Lee County, Mississippi. Tupelo Airport Authority, $4,993, August 2006 to September 2006.

Geophysical Survey and Burial Discovery on a Portion of an Early 18th Century Chickasaw Village Site in Lee County, Mississippi. Guyton and Associates, $5,324, September 2006 to December 2006.

Cultural Resources Predictive Model Utilitizing Light Detection and Ranging for the Coldwater River Basin. Earth Search, Inc., $69,464, Begun January 2007.

A Geophysical Survey of Fosters Cemetery, Northern Alabama. Southeastern Anthropological Institute, $3,292. February 2007 to March 2007.

A Geophysical Survey of a 20 Acre Chickasaw Village Site in Lee County, Mississippi. Chickasaw Nation Division of Housing and Tribal Development, $57,855, Begun March 2007.

A Geophysical Survey of a Chickasaw Site Near Sherman, Mississippi. Wildlife Technical Services, $5,060, November 2007 to January 2008.

A Geophysical Survey of Two Prehistoric Sites Near Hattiesburg, Mississippi. University of Southern Mississippi, $6,000, November 2007 to December 2007.

Geophysical Survey of Two Sites, Quitman County, MS. URS Consultants, $2,936.25, February to March 2009 (Co-Inversitgator with Bryan Haley).

Geophysical Survey, Coahoma and Quitman Counties, MS. URS Consultants, $13,820, April to May 2009 (Co-Inversitgator with Bryan Haley).

Geophysical Survey of the Wye House, Maryland. University of Maryland, College Park Foundation, $5,100, October to December 2009, (Co-Investigator with Bryan Haley).

A Proposal to Conduct Geophysical Survey and Test Excavation in Search of Battlefield Burials on a Portion of the Mansfield State Historic Site, LA. National Park Serice, $18,950, Begun January 2010.

Remote Sensing Research in Preparation for Archaeological Investigations at Four Localities on the Mississippi Gulf Coast. Mississippi Department of Archives and History, $111,997, Begun December 2009.

Geophysical Survey of Nanih Waiyah. Mississippi Band of Choctaw, $3,892, Begun February 2010 (Co-Investigator with Bryan Haley).

CIVIL RIGHTS COMPLIANCE GRID
Discussion

As indicated in the body of the proposal, site location, particularly when dealing with burial mounds, is a sensitive issue. If it is widely known, there is the possibility of vandalism. For that reason, we do not anticipate any local, public presentation of our survey results. For that reason, it is likely that the smallest audience for the presentation of the data derived from our work at the Nelson-Gay Mound is the entire state of Kentucky. The research will also produce conference papers and journal articles which will target regional and national audiences.

CIVIL RIGHTS COMPLIANCE GRID

The Kentucky Heritage Council observes the provisions of the Civil Rights Act of 1964, and all subsequent federal and state laws and regulations. The Heritage Council must ensure that its subgrantees do the same. If your county or area contains, for instance, a significant number of Hispanics or African Americans, then your group must find ways to involve these populations in the grant project. The grid below offers the subgrantee a way to demonstrate to the Kentucky Heritage Council that diverse populations have been considered in the planning of the grant project, in its execution, and in its products.

Please enter a number into each cell below, as applicable. ***The numbers entered will show how many people participate in the project according to their role (the horizontal rows) and according to their population status (the vertical columns).** Use the grid to track the participation of diverse groups in your project.

In a county with a significant number of Hispanics and African Americans, members of those groups can participate in the project planning by being on the team that designs the project. In that same county, they can be involved in the project's execution by participating as volunteer researchers, as informant, as the project's staff members, and the project's advisory group, or as the consultant hired to complete the project. Also, if the project's products are intended for target audiences, such as programs for children in schools with large minority populations, or in documents that focus on the lives of those residents, then indicate on the grid, the numbers of people served by those products.

		Identified Population Group									
		African American, Black	Asian American or Pacific Islander	Hispanic	Native American, Eskimo or Aleut	White	Other Races	Women	Older American	Persons With Disabilities	TOTALS
Role of Participants or Grant Project's Audience	Grant Planning Group										
	Consultant Or Staff					3					3
	Advisory Group, if Applicable										
	Volunteer Workers, if Applicable										
	Student Population, if applicable										
	Product's Intended Audience	7.9%	1.1%	2.7%	0.3%	87.2%	1.1%	50.9%	13.2%	20.3%	
	Other Activity										
	Other Activity										
	Total in County or Area Served*										

*These figures can be derived from the latest census reports for the county or area served and can be obtained by going to http://quickfacts.census.gov/qfd/states/21000.html.